

0590
1209

#11



ENTERED

OIPE

RAW SEQUENCE LISTING

DATE: 12/19/2002

PATENT APPLICATION: US/10/041,672C

TIME: 09:08:35

Input Set : A:\NHL-NP-36.ST25.txt

Output Set: N:\CRF4\12192002\J041672C.raw

```

3 <110> APPLICANT: Mologen Forschungs-, Entwicklungs- und Vetriebs GmbH
4   Universitat Zurich
6 <120> TITLE OF INVENTION: FELINE INTERLEUKIN-12 AS IMMUNOSTIMULANT
8 <130> FILE REFERENCE: NHL-NP-36
10 <140> CURRENT APPLICATION NUMBER: 10/041,672C
11 <141> CURRENT FILING DATE: 2002-01-08
13 <160> NUMBER OF SEQ ID NOS: 11
15 <170> SOFTWARE: PatentIn version 3.1
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 990
19 <212> TYPE: DNA
20 <213> ORGANISM: Artificial Sequence
22 <220> FEATURE:
23 <223> OTHER INFORMATION: feline IL-12 p40
25 <400> SEQUENCE: 1
26 atgcacccctc agcagttggt catcgccctgg ttttccttgg ttttgctggc acctcccctc      60
28 atggccatat gggaactgga gaaaaacgtt tatgtttag agttggactg gcaccctgat      120
30 gcccccgag aaatggtggt ccttacctgc aatactcctg aagaagatga catcacctgg      180
32 acctctgacc agagcagtga agtcctaggc tctggtaaaa ctctgaccat ccaagtcaaa      240
34 gaatttgag atgctggcca gtatacctgt cataaaggag gcgaggttct gagccattcg      300
36 ttcctcctga tacacaaaaa ggaagatgga atttggtcca ctgatattct aagggaacag      360
38 aaagaatcca aaaataagat ctttctaaaa tgtgaggcaa agaattattc tggacgtttc      420
40 acctgctggt ggctgacggc aatcagtacc gatttgaaat tcaactgtcaa aagcagcaga      480
42 ggctcctctg accccaagg ggtgacttgt ggagcagcga cactctcagc agagaaggtc      540
44 agagtggaca acagggatta taagaagtac acagtggagt gtcaggaggg cagtgcctgc      600
46 ccggtgccc aggagagcct acccattgaa gtcgtggtgg acgctattca caagctcaag      660
48 tacgaaaact acaccagcag cttcttcac agggacatca tcaaaccgga cccaccaag      720
50 aacctgcaac tgaagccatt aaaaaattct cggcatgtgg aagtgaactg ggaataccct      780
52 gacacctgga gcaccccaca ttcctacttc tccttaacat ttggcgtaca ggtccagggc      840
54 aagaacaaca gagaaaagaa agacagactc tccgtggaca agacctcagc caaggtcgtg      900
56 tgccacaagg atgccaagat ccgctgcaa gccagggacc gctactatag ctcatcctgg      960
58 agcaactggg catccgtgtc ctgcagttag
61 <210> SEQ ID NO: 2
62 <211> LENGTH: 669
63 <212> TYPE: DNA
64 <213> ORGANISM: Artificial Sequence
66 <220> FEATURE:
67 <223> OTHER INFORMATION: feline IL-12 p35
69 <400> SEQUENCE: 2
70 atgtgcccgc cgcgtggcct cctccttgta accatcctgg tcctgttaaa ccacctggac      60
72 cacctcagtt tggccaggaa cctccccaca cccacaccaa gccagggaat gttccagtgc      120
74 ctcaaccact cccaaaccct gctgcgagcc atcagcaaca cgcttcagaa ggccagacaa      180
76 actctagaat tttaaccctg cacttccgaa gagattgatc atgaagatat cacaaaagat      240

```

RAW SEQUENCE LISTING

DATE: 12/19/2002

PATENT APPLICATION: US/10/041,672C

TIME: 09:08:35

Input Set : A:\NHL-NP-36.ST25.txt

Output Set: N:\CRF4\12192002\J041672C.raw

```

78 aaaaccagca cagtggaggc ctgcttacca ctggaattag ccatgaatga gagttgacctg 300
80 gcttccagag agatctctct gataactaat gggagttgcc tgggtgccag aaagacctct 360
82 tttatgacga ccctgtgcct tagcagtatc tatgaggact tgaagatgta ccagggtggag 420
84 ttcaaggcca tgaatgcaaa gctgttaatg gatcctaaaa ggcagatctt tctggatcaa 480
86 aacatgctga cagctattga tgagctgatg caggccctga atttcaacag tgtgactgtg 540
88 ccacagaact cctcccttga agaaccgat tttataaaaa ctaaaatcaa gctctgcata 600
90 cttcttcattg ctttcagaat cctgtgcagt accatcaata gaatgatgag ctatctgaat 660
92 gcttcctag 669
95 <210> SEQ ID NO: 3
96 <211> LENGTH: 74
97 <212> TYPE: DNA
98 <213> ORGANISM: Artificial Sequence
100 <220> FEATURE:
101 <223> OTHER INFORMATION: 5'-Primer
103 <400> SEQUENCE: 3
104 gagagttctc agagctccta actgcaggac acggatggag agttctcaga gctcatcctg 60
106 ggggtggaac ctaa 74
109 <210> SEQ ID NO: 4
110 <211> LENGTH: 37
111 <212> TYPE: DNA
112 <213> ORGANISM: Artificial Sequence
114 <220> FEATURE:
115 <223> OTHER INFORMATION: 5'-Primer
117 <400> SEQUENCE: 4
118 gtagcggata aggtaccatg catcctcage agttgggt 37
121 <210> SEQ ID NO: 5
122 <211> LENGTH: 37
123 <212> TYPE: DNA
124 <213> ORGANISM: Artificial Sequence
126 <220> FEATURE:
127 <223> OTHER INFORMATION: 5'-Primer
129 <400> SEQUENCE: 5
130 gagagttctc agagctcatc ctgggggtgg aacctaa 37
133 <210> SEQ ID NO: 6
134 <211> LENGTH: 76
135 <212> TYPE: DNA
136 <213> ORGANISM: Artificial Sequence
138 <220> FEATURE:
139 <223> OTHER INFORMATION: Primer fIL12-p35 (eco-)r
141 <400> SEQUENCE: 6
142 gagagttctc agagctccta ggaagcattc agatagctca tcattctatt gatggtcact 60
144 gcacggattc tgaaag 76
147 <210> SEQ ID NO: 7
148 <211> LENGTH: 37
149 <212> TYPE: DNA
150 <213> ORGANISM: Artificial Sequence
152 <220> FEATURE:
153 <223> OTHER INFORMATION: Primer fIL-12p35-1
155 <400> SEQUENCE: 7

```

RAW SEQUENCE LISTING

DATE: 12/19/2002

PATENT APPLICATION: US/10/041,672C

TIME: 09:08:35

Input Set : A:\NHL-NP-36.ST25.txt

Output Set: N:\CRF4\12192002\J041672C.raw

```

156 gtagcggata aggtaccatg tgcccgcgcg gtggcct      37
159 <210> SEQ ID NO: 8
160 <211> LENGTH: 71
161 <212> TYPE: DNA
162 <213> ORGANISM: Artificial Sequence
164 <220> FEATURE:
165 <223> OTHER INFORMATION: Primer f12p35-1-lang
167 <400> SEQUENCE: 8
168 tgctgacagc tattgatgag ctgttacagg ccctgaatgt caacagtgtg actgtgccac      60
170 agaactcctc c      71
173 <210> SEQ ID NO: 9
174 <211> LENGTH: 76
175 <212> TYPE: DNA
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Primer fIL12-p35(eco-)-r
181 <400> SEQUENCE: 9
182 gagagttctc agagctccta ggaagcattc agatagctca tcattctatt gatggtcact      60
184 gcacggattc tgaag      76
187 <210> SEQ ID NO: 10
188 <211> LENGTH: 4522
189 <212> TYPE: DNA
190 <213> ORGANISM: Artificial Sequence
192 <220> FEATURE:
193 <223> OTHER INFORMATION: pMol-fill12p40
195 <400> SEQUENCE: 10
196 tcttccgctt cctcgcctac tgactcgctg cgctcggtcg ttcggctgcg gcgagcggta      60
198 tcagctcact caaaggcggg aatacgggta tccacagaat caggggataa cgcaggaaaag      120
200 aacatgtgag caaaaggcca gcaaaaggcc aggaaccgta aaaaggccgc gttgctggcg      180
202 tttttccata ggctccgccc ccctgacgag catcacaaaa atcgacgctc aagtcagagg      240
204 tggcgaaacc cgacaggact ataaagatac caggcggttc cccctggaag ctccctcgtg      300
206 cgctctcctg ttccgaccct gccgcttacc ggatacctgt ccgcctttct cccttcggga      360
208 agcgtggcgc tttctcatag ctacgctgt aggtatctca gttcgggtga ggtcgttcgc      420
210 tccaagctgg gctgtgtgca cgaaccccc gttcagccc accgctgcgc cttatccggt      480
212 aactatcgtc ttgagtccaa cccggtaaaga cacgacttat cgccactggc agcagccact      540
214 ggtaacagga ttagcagagc gaggtatgta ggcggtgcta cagagttctt gaagtgggtg      600
216 cctaactacg gctacactag aaggacagta tttggtatct gcgctctgct gaagccagtt      660
218 accttcgga aaagagttgg tagctcttga tccggcaaac aaaccaccgc tggtagcggg      720
220 ggtttttttg tttgcaagca gcagattacg cgcagaaaaa aaggatctca agaagatcct      780
222 ttgatctttt ctacggggtc tgacgctcag tggaaacgaaa actcacgtta agggattttg      840
224 gtcatgagat tatcaaaaag gatcttcacc tagatccttt taaattaaaa atgaagtttt      900
226 aaatcaatct aaagtatata tgagtaaact tggcttgaca gttaccaatg cttaatcagt      960
228 gaggcacctt tctcagcgat ctgtctatct cggtcatcca tagttgcctg actcccgcgt      1020
230 gtgtagataa ctacgatacg ggagggctta ccatctggcc ccagtgtgctc aatgataccg      1080
232 cgagacccac gtcaccggc tccagattta tcagcaataa accagccagc cggaaggggc      1140
234 gagcgcagaa gtggctcctg aactttatcc gcctccatcc agtctattaa ttgttgccgg      1200
236 gaagctagag taagtagttc gccagttaat agtttgcgca acgttggtgc cattgctaca      1260
238 ggcacgtgg tgacacgctc gtcgtttggt atggcttcat tcagctccgg ttcccaacga      1320
240 tcaaggcgag ttacatgatc ccccatgttg tgcaaaaaag cggtttagctc cttcgggtcct      1380

```

RAW SEQUENCE LISTING

DATE: 12/19/2002

PATENT APPLICATION: US/10/041,672C

TIME: 09:08:35

Input Set : A:\NHL-NP-36.ST25.txt

Output Set: N:\CRF4\12192002\J041672C.raw

242	ccgatcggtt	tcagaagtaa	gttggccgca	gtgttatcac	tcattggttat	ggcagcactg	1440
244	cataattctc	ttactgtcat	gccatccgta	agatgctttt	ctgtgactgg	tgagtactca	1500
246	accaagtcac	tctgagaata	gtgtatgcgg	cgaccgagtt	gctcttgccc	ggcgtcaata	1560
248	cgggataata	ccgcgccaca	tagcagaact	ttaaaagtgc	tcattcattgg	aaaacgttct	1620
250	tcggggcgaa	aactctcaag	gatcttaccg	ctgttgagat	ccagttcgat	gtaaccctact	1680
252	cgtgcaccca	actgatcttc	agcatctttt	actttcacca	gcgtttctgg	gtgagcaaaa	1740
254	acaggaaggc	aaaatgccgc	aaaaaaggga	ataagggcga	cacggaaatg	ttgaatactc	1800
256	atactcttcc	tttttcaata	ttattgaagc	atttatcagg	gttattgtct	catgagcggg	1860
258	tacataattg	aatgtattta	gaaaaataaa	caaattaggg	ttccgcgcac	atttccccga	1920
260	aaagtgccac	ctgacgtcta	agaaaccatt	attatcatga	cattaacctc	taaaaatagg	1980
262	cgtatcacga	ggccctttcg	tctcgcgcgt	ttcgggtgat	acggtgaaaa	cctctgacac	2040
264	atgcagctcc	cggagacggt	cacagcttgt	ctgtaagcgg	atgccgggag	cagacaagcc	2100
266	cgtcagggcg	cgtcagcggg	tgttgccggg	tgtcggggct	ggcttaacta	tgccgcatca	2160
268	gagcagattg	tactgagagt	gcaccatatg	cgggtgtgaa	taccgcacag	atgcgtaagg	2220
270	agaaaatacc	gcattcaggc	ccattcgcca	ttcaggctgc	gcaactgttg	ggaagggcga	2280
272	tcgggtgcgg	cctcttcgct	attacgccag	ctggcgaaag	ggggatgtgc	tgcaaggcga	2340
274	ttaagttggg	taacgccagg	gttttcccag	tcacgacgtt	gtaaaacgac	ggccagtgcc	2400
276	aagcttggtc	tccccctgga	tccgctagct	taaccgtatt	accgccatgc	attagttatt	2460
278	aatagtaatc	aattacgggg	tcattagttc	atagcccata	tatggagttc	cgcgttacat	2520
280	aacttacggt	aatggcccg	cctggctgac	cgcccaacga	ccccgcacca	ttgacgtcaa	2580
282	taatgacgta	tgttcccata	gtaacgcaa	tagggacttt	ccattgacgt	caatgggtgg	2640
284	agtattttac	gtaaactgcc	cacttggcag	tacatcaagt	gtatcatatg	ccaagtacgc	2700
286	cccttattga	cgtcaatgac	ggtaaatggc	ccgcctggca	ttatgcccag	tacatgacct	2760
288	tatgggactt	tcctacttgg	cagtacatct	acgtattagt	catcgctatt	accattggtga	2820
290	tgcgggtttg	gcagtacatc	aatgggcgtg	gatagcgggt	tgactcacgg	ggatttccaa	2880
292	gtctccaccc	cattgacgtc	aatgggagtt	tgttttggca	ccaaaatcaa	cgggactttc	2940
294	caaaatgtcg	taacaactcc	gccccattga	cgcaaattgg	cggtaggcgt	gtacggtggg	3000
296	aggtctatat	aagcagagct	ggttttagtga	accgtcagat	ggtaccatgc	atcctcagca	3060
298	gttggtcatc	gcctgggttt	ccctgggttt	gctggcacct	ccctcatgg	ccatattgga	3120
300	actggagaaa	aacgtttatg	ttgtagagtt	ggactggcac	cctgatgccc	ccggagaaat	3180
302	ggtggtcctt	acctgcaata	ctcctgaaga	agatgacatc	acctggacct	ctgaccagag	3240
304	cagtgaagtc	ctaggctctg	gtaaaactct	gaccatccaa	gtcaaagaat	ttgcagatgc	3300
306	tggccagtat	acctgtcata	aaggaggcga	ggttctgagc	cattcgttcc	tcctgatata	3360
308	caaaaaggaa	gatggaattt	ggtccactga	tatcttaagg	gaacagaaag	aatccaaaaa	3420
310	taagatcttt	ctaaaatgtg	aggcaaagaa	ttattctgga	cgtttcacct	gctggtggct	3480
312	gacggcaatc	agtaccgatt	tgaaattcac	tgtcaaaagc	agcagaggct	cctctgacct	3540
314	ccaaggggtg	acttggtgag	cagcgacact	ctcagcagag	aaggtcagag	tggaacaacg	3600
316	ggattataag	aagtacacag	tggagtgtca	ggaggcaggt	gcctgcccg	ctgccgagga	3660
318	gagcctaccc	attgaagtcg	tggtgacgc	tattcacaag	ctcaagtacg	aaaactacac	3720
320	cagcagcttc	ttcatcaggg	acatcatcaa	accggaccca	cccaagaacc	tgcaactgaa	3780
322	gccattaaaa	aattctcggc	atgtggaagt	gagctgggaa	taccctgaca	cctggagcac	3840
324	cccacattcc	tacttctcct	taacatttgg	cgtacaggct	cagggcaaga	acaacagaga	3900
326	aaagaaagac	agactctccg	tggaacaagc	ctcagccaag	gtcgtgtgcc	acaaggatgc	3960
328	caagatccgc	gtgcaagcca	gggaccgcta	ctatagctca	tcctggagca	actgggcatc	4020
330	cgtgtcctgc	agttaggagc	tcataatcag	ccataaccaca	tttgtagagg	ttttacttgc	4080
332	tttaaaaaac	ctccacacc	tccccctgaa	cctgaaacat	aaaatgaatg	caattcttgt	4140
334	tgtttaactg	tttattgcag	cttataatgg	ttacaaataa	agcaatagca	tcacaaattt	4200
336	cacaaataaa	gcattttttt	cactgcattc	tagttgtggt	ttgtccaaac	tcattcaatgt	4260
338	atcttaacgc	gaattcaggg	ggagacccaa	ttcgtaatca	tggtcatagc	tgtttctctg	4320

RAW SEQUENCE LISTING

DATE: 12/19/2002

PATENT APPLICATION: US/10/041,672C

TIME: 09:08:36

Input Set : A:\NHL-NP-36.ST25.txt

Output Set: N:\CRF4\12192002\J041672C.raw

```
340 gtgaaattgt tatccgctca caattccaca caacatacga gccggaagca taaagtgtaa 4380
342 agcctgggggt gcctaagtag tgagctaact cacattaatt gcgttgcgct cactgcccgc 4440
344 tttccagtcg ggaaacctgt cgtgccagct gcattaatga atcggccaac gcgcggggag 4500
346 aggcggtttg cgtattgggc gc 4522
349 <210> SEQ ID NO: 11
350 <211> LENGTH: 20
351 <212> TYPE: DNA
352 <213> ORGANISM: Artificial Sequence
354 <220> FEATURE:
355 <223> OTHER INFORMATION: 5'-phosphorylated nucleotide
357 <400> SEQUENCE: 11
358 aggggtccag ttttctggac 20
```

VERIFICATION SUMMARY

DATE: 12/19/2002

PATENT APPLICATION: US/10/041,672C

TIME: 09:08:37

Input Set : A:\NHL-NP-36.ST25.txt

Output Set: N:\CRF4\12192002\J041672C.raw